



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,948	09/18/2003	John D. Tanner	9256	6529

27752 7590 10/02/2006

THE PROCTER & GAMBLE COMPANY  
INTELLECTUAL PROPERTY DIVISION  
WINTON HILL BUSINESS CENTER - BOX 161  
6110 CENTER HILL AVENUE  
CINCINNATI, OH 45224

EXAMINER

KURTZ, BENJAMIN M

ART UNIT	PAPER NUMBER
----------	--------------

1723

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/665,948	<b>Applicant(s)</b> TANNER ET AL.	
	<b>Examiner</b> Benjamin Kurtz	<b>Art Unit</b> 1723	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 42-60 and 62-73 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 42-60 and 62-73 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

1. Claim 69 is objected to because of the following informalities: the last line contains a spelling error and should read, "...such that water **is** prevented from flowing into the gap". Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

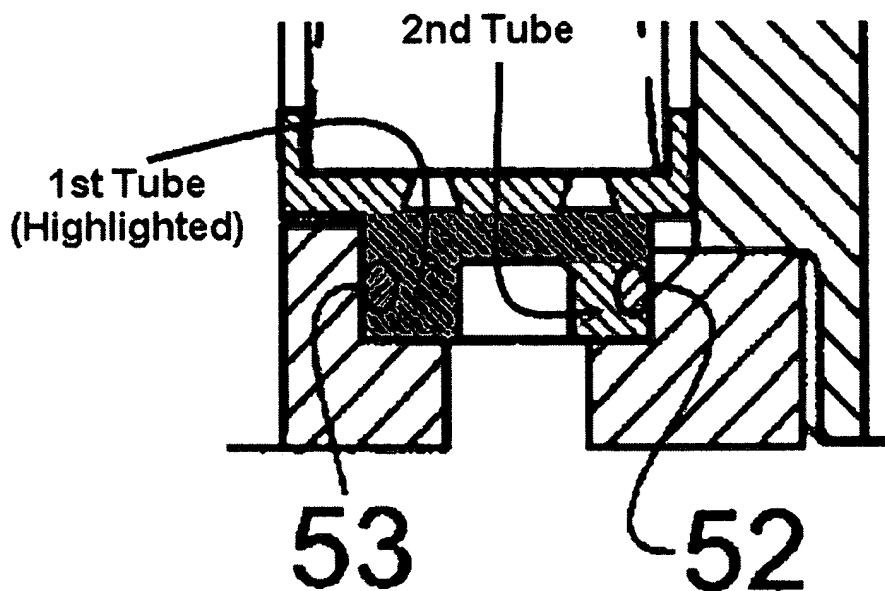
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 42-43, 48, 50, 57, 60, 62-65, 69-70 and 73 are rejected under 35 U.S.C. 102(b) as being anticipated by Guichaoua et al. US 6 308 836 B1. Regarding claim 42, Guichaoua teaches a liquid treatment cartridge capable of sealingly and releasably engaging a liquid treatment device, the cartridge comprising: a housing (5), an inlet (12) for introducing fluid into the cartridge, an outlet (22) for egress of treated liquid and a treatment media (4) in fluid communication with the inlet and the outlet, a first tube (the portion containing o-ring (53)) comprising an inside surface, an outside surface a proximal end and a distal end, wherein the outside surface is a sealing surface (o-ring (53)), a second tube (the portion containing o-ring (52)) comprising an inside surface, an outside surface, a proximal end, and a distal end, wherein the inside surface is a sealing surface (o-ring (52)), wherein the first tube extends from the housing and surrounds the outlet port wherein the first tube surrounds the second tube

such that a gap (51) is formed between the first and second tubes and an outer surface of the housing and wherein the gap is disposed between the inlet and the outlet and sealed such that no liquid may flow into the gap when the cartridge is sealingly engaged to a liquid treatment device (fig. 1).

Regarding claims 43 and 48, the sealing surfaces of the first and second tubes are coplanar (fig. 1); and the second tube extends from the first tube and the first tube extends from the liquid treatment cartridge housing (fig. 1, see below).



Regarding claim 50, Guichaoua teaches a liquid treatment cartridge capable of sealingly and releasably engaging a liquid treatment device, the cartridge comprising: a housing (5), an inlet (12) for introducing fluid into the cartridge, an outlet (22) for egress of treated liquid and a treatment media (4) in fluid communication with the inlet and the outlet, a first tube (the portion containing o-ring (52)) comprising an inside surface, an

comprising an inside surface, an outside surface, a proximal end, and a distal end, wherein the inside surface is a sealing surface (o-ring (53)), wherein the first tube extends from the housing and surrounds the outlet port wherein the second tube surrounds the first tube such that a gap (51) is formed between the inlet and the outlet and sealed such that no liquid may flow into the gap when the cartridge is sealingly engaged to a liquid treatment device (fig. 1).

Regarding claim 57, Guichaoua teaches a liquid treatment cartridge capable of sealingly and releasably engaging a liquid treatment device, the cartridge comprising: a housing (5), an inlet (12) for introducing fluid into the cartridge, an outlet (22) for egress of treated liquid and a treatment media (4) in fluid communication with the inlet and the outlet, a first tube (the portion containing o-ring (52)) comprising an inside surface, an outside surface a proximal end and a distal end, wherein the outside surface is a sealing surface (o-ring (52)), a second tube (the portion containing o-ring (53)) comprising an inside surface, an outside surface, a proximal end, and a distal end, wherein the inside surface is a sealing surface (o-ring (53)), wherein the first tube extends from the housing and surrounds the outlet port wherein the second tube surrounds the first tube and the sealing surfaces extend from the cartridge about the same distance, wherein a gap (51) is formed between the sealing surface of the first tube and the sealing surface of the second tube disposed between the inlet and the outlet and sealed such that no liquid may flow into the gap when the cartridge is sealingly engaged to a liquid treatment device (fig. 1).

Regarding claim 60, Guichaoua teaches a liquid treatment device for sealingly and releasably engaging a liquid treatment cartridge, the device comprising: a first housing (the portion of (1) adjacent to o-ring (52)) comprising an inside surface, an outside surface, and a sealing surface, a second housing (the portion of (1) adjacent to o-ring (53)) comprising an inside surface, an outside surface, and a sealing surface, an inlet (12) for introducing liquid into the cartridge, wherein the second housing surrounds the first housing, a gap (7) is formed in the area between the outside surface of the first housing and the inside surface of the second housing and the sealing surfaces of the first and second housings, and wherein the gap is disposed between the inlet and the outlet passageway and prevents liquid from flowing into the gap when the treatment device is sealingly engaged to a liquid treatment cartridge (fig. 1).

Regarding claims 62-65 and 73, the area between the outside surface of the first housing and the inside surface of the second housing functions as a vent (fig. 1, col. 4, lines 60-63); the water treatment device further comprises a pressure vessel (2) wherein the pressure vessel is sealingly fitted to the water treatment device such that the vessel is in untreated fluid communication with the first housing but not in untreated fluid communication with the second housing when the cartridge (3) is engaged to the treatment device (fig. 1); the pressure vessel (2) is threadably fitted to treatment device (col. 4, lines 33-34); the first and second housings are tubes (fig. 1); and the area between the outside surface of the first housing and the inside surface of the second housing does not function as an untreated water inlet passageway (fig. 1).

Regarding claim 69, Guichaoua teaches a liquid treatment device capable of sealingly and releasably engaging a liquid treatment cartridge the cartridge comprising a first tube (the portion containing o-ring (52)) and a second tube (the portion containing o-ring (53)), the device comprising: an outlet housing (the portion of (1) adjacent to o-ring (52)) engaging the first tube of the cartridge the outlet housing comprising an inside surface and an outside surface, comprising a sealing surface, a vent housing (the portion of (1) adjacent to o-ring (53)) engaging the second tube of the cartridge the vent housing comprising an inside surface and an outside surface, comprising a sealing surface, an inlet (12) for introducing liquid in the cartridge when the device is sealingly engaged to the cartridge, wherein a portion of the inside surface of the outlet housing forms and defines a treated liquid outlet passageway (22) wherein a portion of the outside surface of the outlet housing and a portion of the inside surface of the vent housing forms and defines a vent (7) and wherein a portion the vent housing surrounds a portion of the outlet housing, wherein when the device is sealingly engaged to a cartridge a gap is disposed between the inlet and the outlet passageway and enclosed and sealed between the sealed engagement of the outlet housing and a first tube of the cartridge and the sealed engagement of the vent housing and a second tube of the cartridge such that liquid is prevented from flowing into the gap (fig. 1).

Regarding claim 70, Guichaoua teaches a liquid treatment system comprising: a water treatment cartridge (3) capable of sealingly and releasably engaging a liquid treatment device, the cartridge comprising: a housing (5), an inlet, an outlet, and a treatment media (4) the media in fluid communication with the inlet and the outlet, a first

Art Unit: 1723

tube (the portion containing o-ring (52)) comprising an inside and outside surface, a proximal and distal end and a sealing surface (o-ring (52)), a second tube (the portion containing o-ring (53)) comprising an inside and outside surface, a proximal and distal end and a sealing surface (o-ring (53)), wherein the first tube extends from the housing and surrounds the outlet port and the second tube surrounds the first tube; a liquid treatment device for sealingly and releasably engaging the cartridge, the device comprising: an outlet housing (the portion of (1) adjacent to o-ring (52)) having an inside and outside surface and a sealing surface, and a vent housing (the portion of (1) adjacent to o-ring (53)) having an inside and outside surface and sealing surface, wherein a portion of the inside surface of the outlet housing forms and defines a treated liquid outlet passageway (22) wherein a portion of the outside surface of the outlet housing and a portion of the inside surface of the vent housing forms and defines a vent (7), wherein the first tube sealingly engages the outlet housing to form a first seal and the second tube sealingly engages the vent housing to for a second seal and such that the inside surface of the first tube and the inside surface of the outlet housing are in fluid communication, and such that the outside surface of the first tube and the inside surface of the vent housing are in fluid communication, wherein a gap is disposed between the inlet and the outlet passageway and sealingly enclosed between the first and second seals such that the first and second seals do not permit a liquid to flow into the gap from the inlet to the outlet passageway (fig. 1).



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 44-45, 51, 67-68 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guichaoua (836) in view of Gundrum et al. US 5 891 334.

Regarding claim 44, Guichaoua teaches the inside surface of the second tube is a sealing surface (o-ring (52)) but does not teach a portion of the inside surface of the first tube being a sealing surface. Gundrum teaches a first tube (27) with a portion of the inside surface of the tube (27) is a sealing surface (threads) (fig. 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the inside sealing surface of Gundrum in the cartridge of Guichaoua because the sealing surface allows the housing to be demountably and sealably attached to the end cap (col. 3, lines 4-5).

Regarding claim 45, Guichaoua teaches the water treatment cartridge but does not disclose the distal end of the first tube extending from the cartridge a greater distance than the distal end of the second tube. Gundrum teaches a first tube (27) extending a greater distance from a cartridge (10,11) than a second tube (33) (fig. 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the longer tube of Gundrum with the cartridge of Guichaoua because the longer tube provides more threads and therefore a tighter more secure engagement.

Regarding claim 51, Guichaoua teaches a portion of the inside surface of the first tube is a sealing surface but does not teach a portion of the inside surface of the second tube being a sealing surface. Gundrum teaches a second tube (27) with a portion of the inside surface of the tube (27) is a sealing surface (threads) (fig. 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the inside sealing surface of Gundrum in the cartridge of Guichaoua because the sealing surface allows the housing to be demountably and sealably attached to the end cap (col. 3, lines 4-5).

Regarding claim 67 and 68, Guichaoua teaches the outside surface of the first housing is a sealing surface (at o-ring 52) but does not disclose the outside surface of the second housing being a sealing surface. Gundrum teaches a second housing (28) whose outside surface is a sealing surface (threads and o-ring 43) (fig. 1-2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the second housing of Gundrum in the device of Guichaoua because the sealing surface allows a cartridge housing to be demountably and sealably attached to an end cap (col. 3, lines 4-5) and o-rings are commonly known in the art as providing fluid tight seals.

Regarding claim 71, Guichaoua teaches the water treatment system wherein one sealing surface of the outlet housing is an o-ring (52) oriented around the outside surface of the outlet housing but does not disclose the vent housing having an o-ring oriented around the outside surface of the vent housing. Gundrum teaches a housing (28) with a sealing surface of an o-ring (43) oriented around the outside surface of the

housing (fig. 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the o-ring of Gundrum in the system of Guichaoua because it is well known in the art that an o-ring provides a fluid tight seal.

4. Claims 46, 49, 53, 55, 58 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guichaoua (836) in view of Reid et al. US 5 591 332.

Regarding claims 46, 53 and 58, Guichaoua teaches the cartridge of claims 42, 50 and 57 but does not teach the first and second tubes are without o-rings. Reid teaches first (132) and second (134) tubes without o-rings (fig. 2-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the o-rings be a part of the treatment device and not the cartridge so that the o-rings would not be replaced every time the cartridge is replaced.

Regarding claims 49 and 55, Guichaoua teaches the cartridge of claims 42 and 50 but does not teach a portion of the second tube is a cam surface. Reid teaches a portion of the outside surface of a second tube (134) is a cam surface (fig. 3-4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the cam surface as taught by Reid because the upper outer surface (141) of the tube (134) acts as a cam surface for engaging the valve piston (18) that acts to open and close the valve (col. 8, lines 38-47).

Regarding claim 72, Guichaoua teaches the system of claim 70 but does not teach at least one sealing engagement of the second tube and the vent housing occurring distal to the at least one sealing engagement of the first tube and the outlet housing relative to the water treatment cartridge housing. Reid teaches at least one

sealing engagement (threading) of the second tube (132) and the vent housing (58) occurs distal to at least one sealing engagement (with o-ring 33) of the first tube (134) and the outlet housing (14) relative to the water treatment cartridge housing (122) (fig. 2 and 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the sealing engagement of Reid because having more threading provides are more secure and tighter seal.

5. Claims 47, 54, 59 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guichaoua (836).

Regarding claim 47, Guichaoua teaches the cartridge but does not disclose the diameter of the inside surface of the second tube or the diameter of the outside surface of the first tube. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cartridge as taught by Guichaoua to have the inside surface of the second tube be a diameter of 1-5cm and to have the outside surface of the first tube be a diameter of 0.5-3cm. The cartridge as taught by Guichaoua has the first tube surrounding the second tube, thus the first tube protects the sealing surface of the second tube from possible damage by contact with a foreign object. The diameter qualifications are secondary to this primary function of protecting the sealing surface of the second tube. Although it is possible for the cartridge, as taught by Guichaoua, to have diameters that fall within the specified range, the primary function of protecting the sealing surface is fulfilled.

Regarding to claim 54, Guichaoua discloses the cartridge but does not disclose the diameter of the inside surface of the second tube or the diameter of the outside

surface of the first tube. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cartridge as taught by Guichaoua to have the inside surface of the second tube be a diameter of 1-5cm and to have the outside surface of the first tube be a diameter of 0.5-3cm. The cartridge as taught by Guichaoua has the first tube surrounding the second tube, thus the first tube protects the sealing surface of the second tube from possible damage by contact with a foreign object. The diameter qualifications are secondary to this primary function of protecting the sealing surface of the second tube. Although it is possible for the cartridge, as taught by Guichaoua, to have diameters that fall within the specified range, the primary function of protecting the sealing surface is fulfilled.

Regarding to claim 59, Guichaoua discloses the cartridge but does not disclose the diameter of the inside surface of the second tube or the diameter of the outside surface of the first tube. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cartridge as taught by Guichaoua to have the inside surface of the second tube be a diameter of 1-5cm and to have the outside surface of the first tube be a diameter of 0.5-3cm. The cartridge as taught by Guichaoua has the first tube surrounding the second tube, thus the first tube protects the sealing surface of the second tube from possible damage by contact with a foreign object. The diameter qualifications are secondary to this primary function of protecting the sealing surface of the second tube. Although it is possible for the cartridge, as taught by Guichaoua, to have diameters that fall within the specified range, the primary function of protecting the sealing surface is fulfilled.

Regarding claim 66, Guichaoua discloses the water treatment device where the first and second housings are concentric but does not disclose the first housing extending a greater distance than the second housing. It would have been an obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to extend the first housing at any distance farther than the second housing so long as a proper seal can be maintained between the device and a cartridge.

6. Claims 52 and 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guichaoua (836) in view of Reid U.S. Patent No. 6,274,038.

Regarding claim 52, Guichaoua teaches the water treatment cartridge but does not disclose the most distal sealing surface of the first tube extends a greater distance than the sealing surface of the second tube (fig. 2). Reid (038) teaches a water treatment cartridge where a first tube (26) extends from the cartridge a greater distance than the sealing surface of a second tube (20) (fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the tube dimensions of Reid (038) in the cartridge of Guichaoua because the threading urges the cartridge further into sealing relationship with the head (col. 3, lines 3-5).

Regarding claim 56, Guichaoua teaches the water treatment cartridge but does not disclose that the treatment media comprises a radial flow carbon block. Reid (038) discloses a cartridge (80) that includes a treatment media (75) comprising a radial flow carbon block (fig. 1, col. 3, line 66 – col. 4, line 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the filter media as taught by Reid (038) with the cartridge as taught by Guichaoua because the carbon

Art Unit: 1723

block reduces the concentration of volatile organic contaminants, chemicals, parasites, sediment, biocide, and consequent suspended and dissolved materials including killed microorganisms and pathogens (col. 3, line 66 – col. 4, line 5).

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Kurtz whose telephone number is 571-272-8211. The examiner can normally be reached on Monday through Friday 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bk 9/25/2006

  
W. L. WALKER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700